UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

C-CATION TECHNOLOGIES, LLC Plaintiff, v. TIME WARNER CABLE INC., TIME WARNER CABLE ENTERPRISES LLC, TIME WARNER CABLE TEXAS LLC, ARRIS GROUP, INC., CISCO SYSTEMS, INC., and CASA SYSTEMS, INC., Defendants.	Civil Action No. 2:14-CV-059-JRG-RSP

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF PURSUANT TO P.R. 4-5(b)

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Page

Cases

Statutes

Time Warner Cable Inc., Time Warner Cable Enterprises LLC, Time Warner Cable Texas LLC, ARRIS Group, Inc., Cisco Systems, Inc., and Casa Systems, Inc. ("Defendants") respectfully submit this Responsive Claim Construction Brief Pursuant To P.R. 4-5(b).

I. INTRODUCTION

Throughout its brief, C-Cation repeatedly references the Court's prior claim construction order in the *Comcast* litigation – a litigation in which none of the Defendants here were a party – in an effort to encourage the Court to simply re-adopt its previous findings from the *Comcast* case (*C-Cation Techs., LLC v. Comcast Corp. et al.*, No 2:11-cv-30-JRG-RSP). But C-Cation fails to account for the significant differences between that litigation and this one. First, after the Court's claim construction order in the *Comcast* case, the Supreme Court clarified the legal standard for indefiniteness and rejected the standard in place at the time of the *Comcast* case. Second, for the terms that were previously construed, Defendants now present new arguments not made in the *Comcast* case. Finally, several terms presented for construction here were not addressed at all during claim construction in the Comcast case. As this Court previously recognized, and particularly in view of the new arguments and issues here, the Court's prior constructions are instructive but not binding. *Burns, Morris & Stewart Ltd. P'Ship v. Masonite Int'l Corp.*, 401 F. Supp. 2d 692, 697 (E.D. Tex. 2005). Accordingly, the issues raised in this litigation common to the prior litigation must be reviewed *de novo*. *Id.*

II. BACKGROUND OF THE TECHNOLOGY

The '883 patent "pertains generally to methods and apparatus for facilitating two-way multi-media communication based on a shared transmission media." Ex. 1 at 1:7-12. The '883 patent provides "a dynamic process … to adjust the number of signalling data channels to meet the requirements of varying traffic demand and the system growth." *Id.* at 2:44-46. The advantages of this process – that it "aids in … redundancy for anomalies such as interference and

component failure" – were already present in the prior art. *Id.* at 2:30-32, 2:48-51. Accordingly, the '883 patent claims novelty by adding a "controlled multiple access method." *Id.* at 2:52-54. Critical to the "architecture" of this "multiple access communication system" is an "M number of channels" that "support communication between the central controller and the remote terminals" and is "separated into four categories … for carrying signalling data and user traffic in the forward and reverse directions." *Id.* at 3:4-11.

III. LEVEL OF SKILL IN THE ART

A person of ordinary skill in the art at the time the '883 patent was filed would have had a bachelor's degree in electrical engineering, computer engineering, computer science or its equivalent, and at least two years of work experience in the area of multimedia communications and networking. Ex. 4 at ¶ 12.

IV. LEGAL STANDARDS

Claim construction is governed by the well-established principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Thus, "The claims are of primary importance in the effort to ascertain precisely what it is that is patented." *Phillips,* 415 F.3d at 1312 (quotation omitted). However, the claims "are part of a fully integrated written instrument consisting principally of a specification that concludes with the claims. For that reason, claims must be read in view of the specification of which they are a part." *Id.* at 1315 (quotation omitted). Indeed, "the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Phillips,* 415 F.3d at 1315 (quotation omitted).

"[I]f a disputed term has 'no previous meaning to those of ordinary skill in the prior art[,] its meaning, then, must be found [elsewhere] in the patent.'" *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) (quotation omitted). This is because,

"[w]ithout a customary meaning of a term within the art, the specification usually supplies the best context for deciphering claim meaning." *Honeywell Int'l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 991 (Fed. Cir. 2007).

V. ARGUMENT

The claims requiring construction can be broken down into four categories: 1) claim terms that are indefinite because they fail to provide objective boundaries for determining their scope; 2) claim terms which C-Cation alleges are in the preamble; 3) claim terms found in steps (a)-(e); and 4) the order of the steps recited in claim 1. Defendants address each category in turn.

A. The Indefinite Claim Terms

1. Recent Changes To The Law Of Indefiniteness

In June 2014, eleven months after the Court construed the '883 patent in the first litigation, the Supreme Court issued its decision in *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). In *Nautilus*, the Supreme Court rejected the Federal Circuit's "insolubly ambiguous" standard for indefiniteness. *Id.* at 2129. The Supreme Court held that to be definite, "a patentee ***must be precise enough to afford clear notice of what is claimed***, thereby 'appris[ing] the public of what is still open to them.' ***Otherwise there would be '[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims***." *Id*. at 2129 (emphasis added). The Supreme Court reiterated that eliminating this "zone of uncertainty" is the responsibility of the patentee: "[A]bsent a meaningful definiteness check … patent applicants face powerful incentives to inject ambiguity into their claims. Eliminating that temptation is in order, and 'the patent drafter is in the best position to resolve the ambiguity in … patent claims.'" *Id*. at 2129. The Federal Circuit's "insolubly ambiguous" standard was improper because "tolerat[ing] imprecision just short of that rendering a claim 'insolubly ambiguous' would diminish the definiteness requirement's public notice function and foster the

innovation-discouraging 'zone of uncertainty' against which th[e] Court has warned." *Id.*

Under the correct legal standard, "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id*. at 2124. The Supreme Court's "reasonable certainty" standard ensures that a patent is "precise enough to afford clear notice of what is claimed, thereby 'apprising the public of what is still open to them.'" *Id.* at 2129 (citations omitted).

To assess whether a claim provides "reasonable certainty" about the scope of the invention, the Supreme Court reiterated three basic principles that form the basis of the indefiniteness inquiry. "First, definiteness is to be evaluated from the perspective of someone skilled in the relevant art." *Id*. at 2128. "Second, in assessing definiteness, claims are to be read in light of the specification and prosecution history." *Id.* "Third, '[d]efiniteness is measured from the viewpoint of a person skilled in the [the] art *at the time the patent was filed*.'" *Id.*

In applying the Supreme Court's new "reasonable certainty" standard, the Federal Circuit has explained why subjective claim terms are susceptible to indefiniteness challenges. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (2014). This is because subjective claim terms create the "zone of uncertainty" that the Supreme Court warned against; subjective terms can mean different things to different skilled artisans, leaving them uncertain about whether they are infringing. Thus, to satisfy the definiteness requirement, "[t]he claim, when read in light of specification and file history, must provide objective boundaries for those of skill in the art." *Id.* at 1371. "[A] term of degree fails to provide sufficient notice of its scope if it depends 'on the unpredictable vagaries of any one person's opinion.'" *Id.* (citing *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005)).

When "faced with a 'purely subjective' claim phrase, [courts] must look to the written description for guidance." *Id*. When intrinsic evidence "does not provide a reasonably clear and exclusive definition, leaving the facially subjective claim language without an objective boundary," the claim term is indefinite. *Id*. at 1373; *Harcol Research, LLC v. Europea Sports Prods.*, *Inc.*, No. 2:13-cv-228, 2014 WL 5603653, at *7 (E.D. Tex. Nov. 3, 2014) (Payne, M.J.).

2. "the usability of said signalling data channels" (Claim 1(b))

Term	Defendants	Plaintiff
"the usability of said signalling data channels"	Indefinite or, if the Court rejects indefiniteness, "the receipt of an expected response to a message sent by the central controller to a specific remote terminal"	Plain and ordinary meaning or, to the extent a construction is necessary, "one or more conditions that affect the usability of the signalling data channels"
"monitoring the status of a plurality of the signalling data channels in use … for the usability of said siganlling data channels	No construction necessary. Phrase is indefinite under 35 U.S.C. § 112, ¶ 2. See proposed construction for "usability of said signalling data channels.	Monitoring at least two of the signalling data channels being used for one or more conditions that affect the usability of the signalling data channels.

Even though the parties proposed two different terms for construction (i.e., C-Cation seeks to have more words included in the term to be construed than Defendants), the central issue is the same: is the term "usability" indefinite? Defendants propose that the phrase "the usability of said signalling data channels" is the correct phrase to be construed because it is the smallest phrase that contains the term "usability." C-Cation urges the Court to construe all of step (b), which is the term the Court construed in the *Comcast* case. However, adopting the prior construction will not resolve the parties' dispute here because it contains the term "usability" that Defendants assert is indefinite in view of the Supreme Court's *Nautilus* decision.

The term "usability" is subjective on its face. That subjectivity cannot be resolved by reference to sources in the field of the '883 patent, because "usability" does not have an ordinary meaning. *Id.* at ¶ 32. "Usability" is simply not a term of art in the field of the '883 patent. *Id.*

Whether a particular signalling data channel is "usable" depends on the opinions of the person making the determination. *Id.* One person may think a channel is "usable" based simply on the fact that it can send and receive data; another may think a channel is "usable" only if it meets specific performance criteria, such as speed or reliability, which vary depending on the type of information transmitted (e.g., video, voice, data, etc.). *Id.* Indeed, as the Court previously recognized, usability implies "a continuum of determinations of usability." *Comcast*, Dkt. 222 at 27. Under *Nautilus* and *Interval Licensing*, to avoid a finding of indefiniteness there must be some objective way of determining the boundaries for this "continuum of determinations of usability." Because there is not, the claim is indefinite.[1] Ex. 4 at ¶¶ 32-35.

The Federal Circuit instructs courts to look to the specification and prosecution history to see if some objective definition can be given to the subjective term "usability." *Interval Licensing*, 766 F.3d at 1369-71. The term "usability" is not found in the '883 specification. However, the related term "usable" is found, albeit in only one passage:

> As depicted in FIG. 5, the central controller in the command mode sends the message destined for a specific remote terminal. Normally only the addressed remote terminal will respond to the command, therefore, there is normally no need for collision processing except for transmission error. ***If the expected response is not received at the central controller from the addressed terminal after the time-out period expires, the central controller assumes that either FD-x or RD-x' channel is <u>not usable</u> by the addressed remote terminal***.

Ex. 1 at 8:1-10 (emphasis added). Likewise, the file history contains no relevant discussion imparting any meaning of term "usability." Ex. 4 at ¶ 32; *see* Ex. 2. In the event the Court finds that the term is not indefinite, the one potential objective definition of "usability" based on all of

[1] For similar reasons, the phrase "conditions that affect the usability" in C-Cation's proposed construction is indefinite because there is no objective way to determine what is and what is not a "condition that affects the usability" of a signalling data channel.

the intrinsic evidence is "the receipt of an expected response to a message sent by the central controller to a specific remote terminal." However, as even C-Cation agrees (Br. at 19-21), such a definition creates a tension with dependent claim 3, which identifies four factors – traffic load, collision count, transmission error count, and sensing for failure – that can be monitored as part of step (b). When faced with a similar situation in which the one potential objective definition based on the specification was not fully consistent with the claims, the Federal Circuit found indefiniteness, explaining "[t]he hazy relationship between the claims and the written description fails to provide the clarity that the subjective claim language needs." *Interval Licensing*, 766 F.3d at 1372. The Court should do likewise here.

C-Cation's failure to even attempt to provide objective boundaries for the term "usability," as required by the new Federal Circuit authority. This is fatal to its attempt to counter the indefiniteness of the term. C-Cation argues that because "usability" is not a term of degree, objective boundaries are not required. Br. at 19. To the contrary, the Federal Circuit has explained that ***every*** claim term, not only terms of degree, "***must*** provide objective boundaries for those of skill in the art" "when read in light of the specification and the prosecution history." *Interval Licensing*, 766 F.3d at 1371 (emphasis added); *see also Datamize,* 417 F.3d at 1350 (Fed. Cir. 2005) ("The scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention."); *Innovative Display Techs. LLC v. Acer Inc.*, No. 2:13-cv-544, 2014 WL 4230037, at *26 (E.D. Tex. Aug. 26, 2014) ("In the absence of any objective criteria for evaluating what on its face is a purely subjective term, the disputed term is indefinite") (Payne, M.J.). Indeed, providing objective boundaries is the only way of avoiding the "innovation-discouraging 'zone of uncertainty' against which [the Supreme Court] has warned." *Nautilus*, 134 S. Ct. at 2130.

C-Cation also cites to various portions of the specification that "provide[] examples of parameters that could be monitored relating to the 'usability' of a signalling data channel." Br. at 19. Once again, C-Cation's reasoning is flawed. First, none of C-Cation's quotations contain the word "usability" or "usable." Rather they each describe the "availability" of a signalling data channel. In the context of the '883 patent, "usability" and "availability" mean two different things. Ex. 4 at ¶ 33. Claim 1 uses both the term "usability" (step (b)) and the term "available" (step (e)). Under well established principles of claim construction, the use of these two words in the same claim demonstrates that they must have different meanings. *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000).

The '883 specification further reinforces that "usability" and "availability" have different meanings. Ex. 4 at ¶¶ 33-34. The '883 patent discusses whether a channel is "usable" in one paragraph (Ex. 1 at 8:1-10), and in a separate paragraph discusses the factors that affect availability. *Id.* at 8:35-40. Thus, the consistent and distinct use of "usability" and "availability" in both the claims and the specification demonstrates that C-Cation's reliance on intrinsic evidence defining "availability" is misplaced.

Moreover, even if C-Cation's intrinsic evidence regarding "availability" were relevant to the meaning of "usability," that intrinsic evidence still fails to provide an objective definition for "usability." By C-Cation's own admission, it merely provides exemplary parameters that ***could*** be monitored relating to "usability." C-Cation's intrinsic evidence does not provide any guidance regarding the objective definition a person of ordinary skill in the art could apply to determine if any factor other than the four parameters C-Cation identified from the specification relates to the "usability" of the signalling data channel. Ex. 4 at ¶¶ 33-34. Indeed, as the Supreme Court explained, just because ***some*** meaning can be ascribed to a subset of the factors

that affect "usability" does not mean that the term is definite. *Nautilus*, 134 S.Ct. at 2130. The definiteness inquiry seeks to determine the ***boundaries*** of the claim, not representative examples within undefined boundaries. *Id.* at 2124, 2129. The Supreme Court standard simply cannot be met without objective criteria, because the determination of what does or does not relate to the "usability" of the channel is left to "the unpredictable vagaries of any one person's opinion" and the claim is indefinite. *Interval Licensing*, 766 F.3d at 1371.

C-Cation's attempt to leave the determination of what does and does not constitute the "usability" of a signalling channel to the unpredictable vagaries of any one person's opinion was confirmed during the expert depositions on indefiniteness. When asked to identify what criteria should be used to determine if a particular parameter is a factor that affects usability, C-Cation's own expert, Dr. Heegard, himself reiterated that it is a purely ***subjective*** determination based on the intent of the user: "If ***you*** start monitoring some parameters and based on the values of those parameters, ***you*** decide that ***you*** need to do something about it because the channel has been degraded, then ***you're*** using a monitoring of the usability of the channel to make that decision." Ex. 3 at 37:23-38:5 (emphasis added). Indeed, Dr. Heegard was willing to take this subjective test to ridiculous extremes, going so far as to opine that monitoring for the presence of a dog in the room could be a factor that affects usability. In particular, Dr. Heegard testified as follows:

> If you designed a system that decided that if there were a dog or two in the room that the channel was not usable and you went and reconfigured the network, then you would be practicing the claim. But it wouldn't be a wise thing to do.
>
> But you are monitoring something, and from that, for whatever reason, you decided that's determining whether my channel is usable or not and you're acting on that, then you would be practicing the claim.

Id. at 40:9-20. This hypothetical precisely highlights the dangers in C-Cation's subjective approach to defining "usability." Under this approach, quite literally ***any*** parameter can be one

that affects the usability of the channel, regardless of how meaningless that parameter is and regardless of whether it has any relationship to the teachings of the '883 patent. C-Cation's subjective approach to "usability" is the exact same approach the Federal Circuit rejected in *Datamize*, explaining that "[t]he scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention." 417 F.3d at 1350.

3. "needs to be reassigned" (Claim 1(c))

Term	Defendants	Plaintiff
"needs to be reassigned"	Indefinite or, if the Court rejects indefiniteness, "reassignment is required because the channel is unable to carry signalling data"	Plain and ordinary meaning
"determining whether one of said plurality of remote terminals needs to be reassigned"	No construction proposed other than the construction for "needs to be reassigned"	Plain and ordinary meaning

Step (c) of claim 1 requires "determining whether one of said plurality of remote terminals needs to be reassigned." The parties disagree on the scope of the claim language to be construed, but again the difference is without consequence. The key question is whether "needs to be reassigned" is indefinite. C-Cation proposes that the Court adopt its prior construction for all of step (c). But in doing so, C-Cation ignores both the new indefiniteness standard and the fact that the indefiniteness issue was not raised in the *Comcast* case.

Determining whether a signalling data channels "needs to be reassigned" is another instance of a purely subjective determination. Ex. 4 at ¶ 36. The "need" to reassign, as opposed to merely a desire or preference to reassign, is a determination that depends upon the subjective personal preference of the person operating the system. *Id.* Indeed, the Court has already found that "[i]n the context of the patent, it is clear that a channel that 'needs' to be reassigned is not

limited to a completely failed channel that can provide no communication for a particular remote terminal, but could also result from something less than a complete failure, such as from traffic demands, past collision counts, bandwidth, etc. that impact the desirability of a channel…." *Comcast*, Dkt. 222 at 30. In violation of the new *Nautilus* standard, the '883 patent fails to provide any guidance regarding how to know the meets and bounds of any threshold for "need." Ex. 4 at ¶ 36. For example, there is no explanation of how to determine what level of past collision counts or bandwidth usage creates a ***need*** for reassignment. Absent objective criteria to determine when a "need" for reassignment arises, the phrase "needs to be reassigned" is indefinite. *Id.*

Looking first to the intrinsic evidence, the term "needs to be reassigned" does not appear at all in the specification. The word "reassignment" appears only three times. In the first instance, the specification explains that "[i]n FIG. 6, the logic flow diagram for the registration, channel allocation, terminal assignment and reassignment is depicted." Ex. 1 at 8:16-17. In the second, in figure 6, the word "reassignment" is depicted in a diamond, indicating a decision point. Fig. 6. In the third, the patent explains that "at any time, the central controller can initiate the terminal reassignment process if deemed appropriate for the varying traffic demand or other system dynamics." *Id.* at 8:32-34. These citations provide no meaningful details about the reassignment process and, importantly, each fails to provide any objective measure for determining what amounts to a "***need***" for reassignment. To the contrary, the specification teaches that reassignment is a purely subjective process that occurs whenever it is "deemed appropriate." Ex. 1 at 7:28-31. That is simply a black box that violates the *Nautilus* standard.

C-Cation asserts that dependent claim 4 provides boundaries to the term "needs to be reassigned." But rather than provide objective ***boundaries*** for the term, claim 4 identifies

specific two criteria – overloading and channel failure – that may create a "need for reassignment." Claim 4 does not address any other potential criteria upon which reassignment may be based. Thus, although it provides specific examples of situations that may create a "need for reassignment," claim 4 does not inform a person of skill in the art of the boundaries of "needs to be reassigned" such that the term can be objectively applied in all circumstances and for all criteria that may be monitored. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008) ("When a proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used … that construction is likely to be indefinite.").

In sum, none of the intrinsic evidence provides objective boundaries for the term "needs to be reassigned" and under Federal Circuit law, that claim term is therefore indefinite. Ex. 4 at ¶ 36. Despite its attempts to do so, C-Cation fails to cite any intrinsic that even deals with reassignment, let alone the ***need*** for reassignment. First, C-Cation cites to language that states "channel arrangement can be adjusted according to traffic pattern mix and/or more intelligent management scheme can be implemented with various priority lists." Ex. 1 at 6:54-57. This portion of the specification is describing Figure 2, which "shows the channelization of the communication bandwidth of the shared transmission media" (*Id.* at 4:26-27) – i.e. it is describing the structure and set up of the "shared transmission means" recited in the preamble of claim 1. It has nothing to do with channel reassignment or determining when a "need" for reassignment occurs. Second, C-Cation cites to the "determining factors of availability" recited at column 8:35-41. But this portion of the specification is discussing Figure 6, which makes very clear that assessing the availability of a channel is distinct from – and occurs after – a determination that reassignment is necessary.

C-Cation argues without support that "all that is required in step (c) is the existence of a monitored condition to indicate that need exists. The claim has no requirement as to what the threshold must be." Br. at 22. This means that under C-Cation's interpretation, ***any*** threshold that is established and met creates the need for reassignment. Essentially, C-Cation's position is "tell me how you decided to set up your system, and we'll tell you how you are infringing." For example, the user of a communication system may set the system so that channel reassignment occurs any time the number of remote terminals assigned to the channel exceeds 1,000. Under C-Cation's interpretation, setting this threshold at 1,000 would create a "need" for reassignment regardless of whether the channel was capable of handing 100, 1,000, or 10,000 remote terminals. Indeed, under C-Cation's interpretation, if the same user decided to adjust the system such that reassignment occurs when there are 750, not 1,000, remote terminals assigned to a channel, that same system would still infringe. C-Cation's expert, Dr. Heegard, even went so far as to testify that even a ***random*** threshold would satisfy this claim limitation. Ex. 3 at 87:16-25. This demonstrates that C-Cation's proposed construction for "needs to be assigned" is based purely on the subjective preferences of the person performing the claimed method, and depends on "the unpredictable vagaries of any one person's opinion." *Interval Licensing*, 766 F.3d at 1371; *Datamize*, 417 F.3d at 1350; Ex. 4 at ¶¶ 36-37. It simply fails to preserve the definiteness of "needs to be reassigned." *Id.*

Given the lack of objective criteria, the phrase "needs to be reassigned" is indefinite. In the event the Court disagrees, the one and only potential objective definition for "needs to be reassigned" is "reassignment is required because the channel is unable to carry signalling data." This construction captures the two conditions – overloading and failure – that dependent claim 4 identifies as creating a "need for reassignment."

4. "determining whether a different and suitable signalling data channel is available" (Claim 1(d))

Term	Defendants	Plaintiff
"determining whether a different and suitable signalling data channel is available"	"different and suitable" is indefinite; "is available" means "capable of carrying signalling data"	Plain and ordinary meaning
"is available"	capable of carrying signalling data	Phrase should be given its ordinary meaning and does not require additional construction

Step (d) requires "determining whether a different and suitable signalling data channel is available." Again, the parties propose different terms for construction. Defendants propose that two phrases found in step 1(d) be construed: "different and suitable"[2] and "is available." C-Cation proposes that only "is available" be construed.

As with the other steps, step 1(d) uses a highly subjective term, "different and ***suitable***" to describe the signalling data channel. Indeed, on its face whether a particular channel is "suitable" epitomizes the type of claim term that depends on "the unpredictable vagaries of any one person's opinion." *Interval Licensing*, 766 F.3d at 1371; Ex. 4 at ¶ 38. A particular channel may be deemed "suitable" by one person and the same channel deemed not "suitable" by another. *Id.* Without some objective measure to determine "suitability," the claim term is hopelessly indefinite. *Id.*

The specification provides absolutely no guidance about how to determine if a particular channel is "different and suitable." The phrase "different and suitable" is not found anywhere in the specification. Likewise, there is no discussion in the prosecution history that sheds light on how to determine if a channel is "different and suitable." Ex. 4 ¶ 38; *see also* Ex. 2. Thus, the

[2] "Different and suitable" also appears in step 1(e). The parties do not dispute that the same construction will apply to both steps.

intrinsic evidence does not provide any way to define "different and suitable" in an objective manner. Ex. 4 at ¶ 38.

The fact that the specification provides no guidance regarding the meaning of "suitable" is confirmed by C-Cation's brief. The best C-Cation can muster is two cites, neither of which have anything to do with whether a channel is "suitable." First, C-Cation cites to the Background of the Invention, which states that "in addition to availability, bandwidth and delay of the traffic-bearing channel, the traffic requirements should include responsiveness of the signalling process and the quality of the transmission means." Ex. 1 at 1:35-38. This sentence does not even mention suitability and instead merely contains a description of desired characteristics for a multiple access communication system. *See, e.g.*, *Liebel-Flarsheim Co. v. Medrad, Inc.,* 358 F.3d 898, 908 (Fed. Cir. 2004) ("The fact that a patent asserts that an invention achieves several objectives does not require that each of the claims be construed as limited to structures that are capable of achieving all of the objectives."). Moreover, even if this sentence is describing "suitability," it does not even come close to providing an objective standard by which a person of skill in the art can determine whether a channel is "suitable" or not. Second, C-Cation cites to the same sentence it cites in connection with "usability" and "needs to be reassigned": "The determining factors of signalling data channels ***availability*** include the number of remote terminals using the signalling data channel, the traffic requirements, past collision count, channel error status, and bandwidth of the signalling data channel." Ex. 1 at 8:35-38 (emphasis added). This sentence relates to "availability," however, not whether a channel is "suitable." The language of the term itself makes clear that suitable" and "available" are two separate concepts: "determining whether a different and ***suitable*** signalling data channel is ***available***." In order to give meaning to every word in the claim, as

required by Federal Circuit law, "suitable" must mean something other than "available." *See CAE Screenplates*, 224 F.3d at 1317. Thus, C-Cation's citation to a portion of the specification describing "availability" is irrelevant to the meaning of a different claim term, "suitable."

Likewise, C-Cation's citation to claim 5 does not provide an objective definition of "suitable." Claim 5 recites sensing for spare capacity and allocating a new channel if no other channel has spare capacity. As an initial matter, it is not clear from the text of claim 5 whether sensing for spare capacity relates to determining whether the channel is "available," as required by one portion of step (d) or whether sensing for spare capacity relates to determining whether the channel is "suitable," as required by another portion of step (d). Moreover, even if sensing for spare capacity relates to "suitability," claim 5 does not provide an objective definition of "suitable." C-Cation admits that, at most claim 5 describes what a "suitable" channel ***could*** be as it relates to one specific parameter. Br. at 24. But claim 5 makes no attempt to provide an objective definition that can be applied to any potential parameter that is monitored. Thus, C-Cation's attempt to rely on claim 5 does not save step (d) from being indefinite.

Finally, the Court should reject C-Cation's attempt to come up with a definition of "suitable" based on the "context" of claim. According to C-Cation, the context of the claim merely requires "a determination of whether a channel is 'suitable' based on a condition previously monitored in step (b). The existence of a threshold of a monitored condition is all that is required." Br. at 24. But, C-Cation's proposed interpretation does not resolve the indefiniteness issue because it is based on the subjective opinion of the individual allegedly practicing the invention. *Datamize*, 417 F.3d at 1350. Under C-Cation's interpretation, "suitability" is determined entirely by the subjective thresholds set by the user of the communication system. Applying C-Cation's definition, ***any*** time a new channel is selected

regardless of the reason, it will necessarily be "suitable" because all that is required is ***some*** threshold that in the opinion of the user is sufficient. For example, if the user wants to monitor for the number of remote terminals and assign to a channel with less than 1,000 terminals assigned to it, under C-Cation's definition, that's a threshold and therefore the channel is "suitable." But if the same user changes her mind and adjust the system so that the threshold is now 500 terminals, that too is a threshold and therefore under C-Cation's interpretation, the channel is "suitable." This analysis holds true regardless of whether the channels in the hypothetical systems actually have the ability to handle 200, 1,000, or 5,000 terminals – indeed, the requirements of the system are irrelevant under C-Cation's proposal. C-Cation's expert, Dr. Heegard, confirmed that this interpretation is purely subjective. Whether a channel is "suitable" is based on an "estimate" derived from the monitored factors of usability of whether another channel would be an "improvement" in the eyes of the person operating the system. Ex. 3 at 112:2-18. Indeed, Dr. Heegard admits that system requirements are "random." *Id.* Determining the scope of a claim based on "random" system requirements is the antithesis of definiteness.

C-Cation cites to no intrinsic evidence to support its interpretation that ***any*** threshold can be used to demonstrate the "suitability" of a channel. To the contrary, the intrinsic evidence states that the purpose of the patent is to ***improve*** the efficiency of the communication system: "Accordingly the achieved benefits of the present invention are: … Improved system redundancy." Ex. 1 at 4:1-12. These benefits are not achieved if ***any*** threshold is accepted as adequate as C-Cation argues. In any event, there is no discussion anywhere in the '883 patent about how to objectively quantify whether a particular channel is "better" or "improved."

The term "is available" likewise is highly subjective. The '883 patent discusses a range of "determining factors … of availability" such that different persons of ordinary skill in the art

would come to different conclusions about whether a particular channel "is available." Ex. 1 at 8:35-39. Under *Interval Licensing*, "is available" is indefinite unless the intrinsic evidence provides an objective definition. 766 F.3d at 1371. In this case, the intrinsic evidence provides such a definition: whether the signalling data channel is capable of carrying signalling data. *See* Ex. 1 8:35-41; claim 5. Accordingly, the Court should adopt Defendants' construction.

5. "said predetermined signalling data channel" and "said predetermined channel" (Claim 1(c) & 1(d))

Term	Defendants	Plaintiff
said predetermined signalling channel said predetermined channel	Indefinite	"one of the signalling data channels in use"

The terms "said predetermined signalling data channel" and "said predetermined channel" are indefinite for lack of a clear antecedent basis. Step (a) of claim 1 recites a "pair of predetermined signalling data channels," and this plural pair of channels is the alleged antecedent basis for the singular "said predetermined signalling data channel" and "said predetermined channel." Because of this ambiguity, it is unclear *which* of the pair of channels "said" refers to. The Manual of Patent Examining Procedure (MPEP) sets forth an example of this exact scenario: "if two different levers are recited earlier in the claim, the recitation of 'said lever' in the same or subsequent claim would be unclear where it is uncertain which of the two levers was intended." MPEP § 2173.05(e). Just as in the MPEP example, it is unclear which of the pair of channels "said" channel is referring to, and the claim is therefore indefinite.

The Court disagreed with Defendants in the prior case that these terms were indefinite under the "insolubly ambiguous" standard in place at the time. *Comcast*, Dkt. 222 at 42-43.[3]

[3] Respectfully, the Court's pre-*Nautilus* approach in the *Comcast* case, in which it applied a narrowing construction, has been overruled by *Nautilus*. *See Adaptix, Inc. v. Hauwei*

But since *Nautilus*, this Court has held, as recently as November 20, 2014, that a term that "requires an antecedent basis but lacks any … renders the claims indefinite as failing to 'inform those skilled in the art about the scope of the invention with reasonable certainty.'" *Adaptix*, 2014 WL 6609560, at *9 (quoting *Nautilus*, 134 S.Ct. at 2129) (finding "the indication" indefinite for lack of antecedent basis), at *12-*13 (finding "each cluster" indefinite for lack of antecedent basis). The same conclusion here is appropriate here. No certainty can be gleaned from the intrinsic evidence about which of the "pair of predetermined signalling data channels" "said" refers to or if "said" refers to both of the predetermined signalling data channels. A person of ordinary skill in the art reading the claims would not know with reasonable certainty which signalling data channel "said" refers to. This ambiguity creates the "zone of uncertainty" that the Supreme Court warned against, and accordingly, those terms are indefinite. *See Nautilus*, 134 S.Ct. at 2123.

C-Cation's brief is incorrect for the additional reason that it does not even propose the Court's construction for these terms, instead proposing that both terms be construed as "one of the signalling data channels in use." Br. at 26. C-Cation's new proposed construction would read "predetermined" out of the claims, rendering that term meaningless. Its proposal is therefore improper for a reason independent of the indefiniteness inquiry. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.,* 381 F.3d 1111, 1119 (Fed. Cir. 2004) ("all claim terms are presumed to have meaning in a claim").

B. The "Preamble" Is Limiting and Needs to Be Construed

A preamble limits a claim if it "recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*,

---

Techs. Co. Ltd., -- F. Supp. 3d --, 2014 WL 6609560, at *4 (E.D. Tex. 2014) ("*Nautilus* abrogated the use of a 'narrowing construction' to avoid a finding of indefiniteness.").

289 F.3d 801, 808 (Fed. Cir. 2002) (quotation omitted). A preamble constitutes a limitation "when the claim(s) ***depend on it for antecedent basis***, or when it 'is essential to understand limitations or terms in the claim body.'" *C.W. Zumbiel Co., Inc. v. Kappos*, 702 F.3d 1371, 1385 (Fed. Cir. 2012) (citing *Catalina Mktg.*, 289 F.3d at 808) (emphasis added). Use of the words "said" or "the" mean that a term derives its antecedent basis from an earlier instance of the term in the claim. *Baldwin Graphics Systems v. Siebert, Inc.*, 512 F.3d 1338, 1343 (Fed. Cir. 2008).

1. "a shared transmission means for signalling data and user information" and "user information" Are Substantive Limitations

C-Cation incorrectly argues that the phrases "a shared transmission means for signalling data and user information" and "user information" are part of the preamble. Br. at 7-8. They are not. The Federal Circuit has explained that any words that come after "comprising" are substantive limitations. *See Microprocessor Enhancement Corp. v. Tex. Instruments Inc.,* 520 F.3d 1367, 1375-76 (Fed. 2008) (finding that a "preamble within a preamble" was a structural limitation); *see also Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1382-83 (Fed. Cir. 2000); *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1380 (Fed. Cir. 2001). Claim 1 begins by stating "[i]n a multiple access communication system ***comprising***…." Ex. 1 at 14:27. Both "a shared transmission means…" and "user information" come after the word "comprising" and are thus not part of the preamble – they are limitations.

Even if "a shared transmission means for signalling data and user information" and "user information" are considered to be part of the preamble, the preamble is limiting because it provides antecedent basis for multiple terms found in the body of the claim. *C.W. Zumbiel*, 702 F.3d at 1385. The terms "central controller," "plurality of remote terminals" and "signalling data channels," all found in the body of claim 1, are all found first in the claim's preamble. Ex. 1 at 14:27-33. And the terms "a central controller" and "a plurality of remote terminals" provide the

antecedent basis for "said central controller" and "said plurality of remote terminals" in step (a) of claim 1. *Id.*. Thus, the preamble is limiting. *C.W Zumbiel*, 702 F.3d at 1385. Unlike the authority cited by C-Cation, this is not a situation where "deletion of the preamble" would "not affect the structure or steps of the claimed invention," *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1358-59 (Fed. Cir. 2010) (quoting *Catalina*, 289 F.3d at 809), where the preamble is "merely duplicative of the limitations in the body of the claim," *Id.* (quoting *Symantec Corp. v. Computer Assocs. Int'l, Inc.*, 522 F.3d 1279, 1288-89 (Fed. Cir. 2008)), or where the preamble "merely gives a descriptive name to the set of limitations in the body of the claim," *Id.* (quoting *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434-35 (Fed. Cir. 2000)). As described herein, the preamble of claim 1 does more than "simply describe[] features that necessarily exist" in a multiple access communication system. *See Schumer v. Lab. Computer Sys., Inc.*, 309 F.3d 1304, 1310 (Fed. Cir. 2002). The preamble is not superfluous, because its deletion would result in lack of antecedent basis for numerous claim terms. *See id.*

Further, the '883 patent repeatedly emphasizes the importance of forward and reverse signalling data channels and forward and reverse traffic bearer channels to the claimed invention. *See, e.g.,* Ex. 1 at 2:65-3:13, 5:8-24, 5:58-62, Fig. 2. The claimed "shared transmission means" carries all four of these channels, while the "user information" is carried only on the traffic bearer channels. *See id.* The '883 patent's specification explains that a "shared transmission" structure is required for all four categories of communication channels, including the signalling data channels, recited in the claim. *See* Ex. 1 at 5:21-24. The "shared transmission means" and "user information," along with the central controller and plurality of remote terminals also recited in the preamble, are essential to the structure of claim 1, because they recite the hardware described in the '883 patent as necessary to perform the claimed method. They therefore limit

the claim – without them, the claim would lack the structure described throughout the '883 patent, including the structure depicted in Figure 1 and described in its corresponding text. *Rotatable Techs. LLC v. Motorola Mobility* LLC, 567 Fed. Appx. 941, 943 (Fed. Cir. 2014).

2. "a shared transmission means for signalling data and user information" (Claim 1)

Term	Defendants	Plaintiff
"a shared transmission means for signalling data and user information"	Function: carrying and transmitting information on signalling data and user information channels Structure: communication media common to a plurality of remote terminals having forward and reverse bandwidth onto which separate signalling data and traffic bearer channels are multiplexed in both the forward and reverse directions	This phrase is a non-limiting preamble term that needs no further construction. If deemed a limitation, and to the extent construction is necessary: "a medium for transmitting signalling data and user information between a plurality of remote terminals and a central controller" Phrase should not be construed under 35 USC §112(6), If, however, construction under §112(6) is deemed appropriate: Function: carrying signalling data and user information Structure: includes: (1) airwaves; (2) coaxial cable; (3) fibre optic cable; or (4) wires.

It is well-settled that use of the word "means" triggers a rebuttable presumption that § 112, ¶ 6 governs the construction of the claim term. *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1097 (Fed. Cir. 2014). As C-Cation's own authority recognizes (Br. at 9-10), this presumption is overcome only if "the claim itself recites sufficient structure, material, or acts to perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999). C-Cation has failed to rebut this presumption, nor could it: claim 1 does not provide ***any*** structure for this function at all, and ***none*** of the structure proposed by C-Cation can be found anywhere in claim 1. The claim provides that signalling data and user information are included in a shared transmission means, but recites no structure for doing so. Rather than identifying structure in the claim, C-Cation instead makes the conclusory statement

that the term itself connotes sufficient structure. Br. at 9-10. This unsupported argument fails to rebut the presumption that § 112, ¶ 6 governs.[4]

C-Cation also attempts to avoid § 112, ¶ 6 treatment of the "shared transmission means" term using unpersuasive extrinsic evidence that defines a different term – shared transmission medium.[5] But whether a term is "used in common parlance or by persons of ordinary skill in the pertinent art to designate structure" is only relevant to "the presumption that applies when the term 'means' does not appear in the claim," which is not the case here. *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1356 (Fed. Cir. 2006); *see also Inventio AG v. ThyssenKrupp Elevator Am. Corp.*, 649 F.3d 1350, 1358-59 (Fed. Cir. 2011).

The function of "shared transmission means" proposed by Defendants – "carrying and transmitting information on signalling data and user information channels" – is entirely consistent with the intrinsic evidence. The claim language expressly provides that two different types of information share the transmission means: signalling data and user information. And the specification could not be clearer: a "common shared transmission media" has a "number of communication channels (M)" which "are separated into four categories as depicted in FIG. 2, for carrying signalling data and user traffic in the forward and reverse directions." Ex. 1 at 2:65-3:13. These four categories are a "forward signalling data … channel, forward traffic bearer … channel, reverse signalling data … channel, and reverse traffic bearer … channel." *Id.* As explained in detail below, the "user information" of the claim is the "user traffic" carried by the

[4] C-Cation cites to *Moody v. Aqua Leisure International*, where "pump means" was not given means-plus-function treatment because the claim provided sufficient structure to entirely perform the claimed function. 2012 WL 53354842, at *12 (S.D. Tex. 2012). In contrast, claim 1 of the '883 patent provides no structure for the claimed function at all. *See id.*

[5] C-Cation's extrinsic evidence consists of a number of patents, each reciting a shared transmission ***medium*** and a dictionary definition of "transmission medium." Br. at 11 n. 5, 12. Notably, the dictionary post-dates the '883 patent's filing date. (Dkt. 80-8).

traffic bearer channels. The specification thus parallels the functional description of the "shared transmission means" in the claim, i.e., "for [carrying] signalling data and user information." Accordingly, this concept of four communication channels, with at least two channels "shared" in the transmission means, is the essence of the '883 patent's alleged invention, and is consistent with Defendant's proposed function, which merely specifies the presence of signalling data and user information channels. *See Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (It is "entirely proper to consider the functions of an invention in seeking to determine the meaning of particular claim language."); *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) ("[W]hat the inventors actually invented and intended to envelop with the claim" is relevant in construing a claim.).

Moreover, only Defendants' proposal identifies structure clearly linked in the specification with the claimed function. Section 112, ¶ 6 states that a means-plus-function claim "shall be construed to cover the ***corresponding*** structure … described in the specification." 35 U.S.C. § 112, ¶ 6 (emphasis added). A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). The structure corresponding to the claimed function for the "shared transmission means" is disclosed in part in Figure 2, which "shows the channelization of the communication bandwidth of the shared transmission media between the central controller and the remote terminals for different functions." *See* Ex. 1 at 4:26-29, Fig. 2. The disclosed channelization requires that the channels be "separated into four categories … for carrying signalling data and user traffic in the forward and reverse directions." *Id.* at 2:65-3:13, 5:58-62. Consistent with these disclosures, Defendants' proposed construction recites separate

signalling data and traffic bearer channels, sharing a transmission media in both forward and reverse directions. In contrast, C-Cation proposes four elements allegedly "included" in the structure of "shared transmission means" – airwaves, coaxial cable, fibre optic cable, and wires – ***none of which are disclosed in the '883 patent's specification.*** These structures are thus not linked at all to the claimed function, let alone "clearly linked" as the law requires. *See B. Braun*, 124 F.3d at 1424. Because only Defendants' proposed construction actually links structure disclosed in the '883 patent to the claimed function, the Court should adopt Defendants' construction and reject C-Cation's proposed alternative construction.

3. "user information" (Claim 1)

Term	Defendants	Plaintiff
"user information"	"information other than signalling data transmitted to or from users of the system"	A non-limiting preamble term that needs no further construction.

The term "user information" appears exactly once in the entire '883 patent: in the preamble of claim 1. The Court should construe this term because (1) it does not have a plain and ordinary meaning and (2) construction of this term is necessary to clarify the meaning of "user information" in the context of the disclosure of the '883 patent. The '883 patent describes a number of overlapping concepts using similar terminology: "signalling data channels" exclusively carry "signalling data," which may include "sporadic user ***data***," (*see* Ex. 1 at 3:52-55, 7:32-49, 13:59-63), while "traffic bearer channels" exclusively carry "user ***traffic***" (*see id.* at 3:4-16, 5:15-26, 5:58-62, 13:59-63). One example given in the '883 patent of "user traffic," consistent with the '883 patent's general focus on telephony, is "voice traffic." *Id.* at 13:59-63.

"User information" lacks a plain and ordinary meaning and requires construction because it is unclear that it is commensurate with the concept of "user traffic," as opposed to the concept of "user data" which, as is explained above, can be carried on signalling data channels. *See id.* at

3:52-55, 7:32-49, 13:59-63. "User information" is distinct from signalling data – claim 1 expressly recites both "signalling data ***and user information***"[6] – and is the type of data carried on the separate traffic bearer channels. Defendants' proposed construction, which clarifies that "user information" is information other than signalling data transmitted to or from users of the system, both resolves this lack of clarity and, contrary to C-Cation's proposal, does not render "user information" superfluous.[7] Defendants' proposal should be adopted.

C. Construction of Terms Found in Steps (a) to (e)

1. "signalling data channel(s)" (Claims 1, 3, and 4)

Term	Defendants	Plaintiff
"signalling data channels"	"channels used for carrying signalling data; the channels may also carry user data"	"channels used for carrying signalling data; the channels may also carry user traffic"

Defendants' proposed construction is the same as the Court's construction in the *Comcast* case with one minor adjustment: "user traffic" should be replaced with "user data." As described in greater detail *supra*, the '883 patent discloses that signalling data channels may carry "sporadic user data." *See* Ex. 1 at 3:52-55, 7:32-49, 13:59-63. However, the '883 patent distinguishes "user ***data***," which is carried on a data channel such as a signalling data channel from "user ***traffic***," which is carried on traffic bearer channels. *See id.* at 3:4-16, 5:15-26, 5:58-62, 13:59-63. This is confirmed by the very sentence from the specification emphasized by C-

[6] According to C-Cation, Defendants' construction is a negative limitation without an "anchor" in the claim language or the specification. Br. at 13. But the required "anchor" is express in the claim language, which explicitly recites "signalling data" in addition to "user information." *See Vertical Computer Sys. v. Interwoven, Inc.*, No. 2:10-cv-490-JRG, 2013 WL 5202685, at *9 (E.D. Tex. Sept. 16, 2013)

[7] C-Cation's authority on this point is distinguishable because Defendants' proposed construction is necessary to provide clarity to the relationship between claim 1 and the '883 patent's disclosures. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1566-68 (Fed. Cir. 1998); *Wi-Lan, Inc. v. Acer, Inc.*, 712 F. Supp. 2d 549, 570 (E.D. Tex. 2010).

Cation: "Data channels are used for carrying signalling or data traffic while bearer channels are used for carrying ***user traffic*** similar to circuits in telephony." *Id.* at 5:58-62 (emphasis added). Thus, the '883 patent's specification expressly confirms that data channels ***do not carry user traffic***. A person of ordinary skill in the art, interpreting "signalling data channel," would understand this distinction, and would understand that, in this regard, the Court's prior construction is inconsistent with the specification. *See Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). Moreover, given C-Cation's position throughout its brief that claim 1 is limited to signalling data channels, precision in this term's construction is particularly important. *See, e.g.,* Br. at 11 (arguing that an interpretation that requires "channels other than signalling data channels" is inconsistent with claim 1.). Respectfully, the Court's construction should be modified so that it is fully consistent with the intrinsic evidence.

2. "establishing communications between said central controller and said plurality of remote terminals" (Claim 1(a))

Term	Defendants	Plaintiff
"establishing communications between said central controller and said plurality of remote terminals"	"establishing two-way connections between the central controller and two or more remote terminals so that user information can be transmitted and received"	Phrase should be given its ordinary meaning and does not require additional construction other than the phrase "remote terminals" as set forth herein.

Step (a) of claim 1 requires "establishing communications between said central controller and said plurality of remote terminals." The basic dispute between the parties is whether messages that are sent as part of the registration process establish communications, or whether communications are established only after the registration process is complete. Although it purports to be applying the plain meaning of "establishing communications," C-Cation's interpretation is inconsistent with the intrinsic evidence. Indeed, C-Cation does not cite a single portion of the specification to support its arguments. Br. at 14-17.

The '883 patent repeatedly explains that the registration process is the means by which communications are established. For example, the Brief Summary of the Invention explains that "[t]hrough the registration process, the central controller assigns the remote terminal to a group supported by coupling of the specific forward and reverse signalling data channels." Ex. 1 at 3:47-50. The very next sentence in the specification demonstrates that after the registration process is complete, communications are established: "***Afterwards***, the ***communication*** between the central controller and the remote terminal follows a two-phase process." *Id.* at 3:50-52 (emphasis added). Later in the same paragraph, the specification explains that the result of establishing communications is that user data can be sent and received: "The traffic bearer channel ***is established*** via signalling protocol over the signalling data channels." *Id.* at 3:61-63 (emphasis added). Thus, Defendants' proposed construction closely tracks the Summary of the Invention's description of the registration process.

Moreover, the figures and the corresponding text in the Description of Preferred Embodiment reinforce that communications are established once the registration process is complete. These figures and text also demonstrate that C-Cation's attempt to point to registration messages as "establishing communications" is not correct. As the specification explains, "FIG. 4 depicts the logic flow diagram for polling and registration process at the central controller" while "FIG. 7 depicts the logic flow diagram for registration process at the remote terminals." *Id.* at 4:33-34; 4:40-41. As shown by Fig. 4 and its corresponding text, the registration process involves the central controller sending a poll to the remote terminals. *Id.* at Fig. 4; 7:50-67. As shown in Fig. 7 and its corresponding text, once the remote terminal receives the poll from the central controller, the remote terminal attempts to send a response until that response is acknowledged by the central controller. *Id.* at Fig. 7; 8:56-9:6. As indicated in

Fig. 7, the result of this registration process is that the remote terminal may perform "operations," i.e., they can send or receive user information.

Finally, C-Cation's argument that dependent claim 2 is somehow inconsistent with Defendants' construction is not correct. Claim 2 merely recites a specific registration process in which a primary and backup channel are used by both the central controller and the remote terminal. *Id.* at 14:54-15:12. There is nothing inconsistent between this specific type of registration process and Defendants' proposed construction. The result of the specific registration process in claim 2 is the same – user information can be sent and received between the central controller and the remote terminal. Indeed, the fact that claim 2 requires numerous messages to be sent between the central controller and remote terminal before communications have been established demonstrates that C-Cation's interpretation of the claim is not correct.

D. The Steps of Claim 1 Must Be Performed in Order

Defendants	**Plaintiff**
The steps of claim 1 ((a) through (e)) are ordered in sequence.	The steps of claim 1 are not required to be performed in any particular order except that steps (c) and (d) must be performed after steps (a) and (b); and step (e) must be performed after all other steps.

"A claim requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written, or the specification directly or implicitly requires an order of steps." *Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398-99 (Fed. Cir. 2014) (quotation omitted). When one claim step must be completed before another begins – as in claim 1 – it is appropriate to require an ordering of the claim's steps. *Mformation*, 764 F.3d at 1399. Ordering claim steps is also appropriate if a claim limitation would be rendered superfluous without it. *Mformation*, 764 F.3d at 1399.

C-Cation agrees generally that the language of claim 1 requires a certain order of steps,

but takes the position that there is no set order between steps (a) and (b) – to C-Cation either step (a) or (b) can be performed first. Br. at 28. However, the claim language itself mandates that step (a) precedes step (b). As a matter of logic, step (a), which requires "establishing communications … via a plurality of signalling data channels" must occur before step (b), which requires the "status of a plurality of ***the*** signalling data channels in use" are "monitored." The phrase "***the*** signalling data channels" relies on "a plurality of signalling data channels" in step (a) for its antecedent basis – i.e., the channels on which communications are established are the ones that are monitored. This conclusion is further reinforced by step (b)'s recitation of signalling data channels that are "***in use***." A channel is only "in use" when it is used to establish communications between the central controller and a remote terminal as recited by step (a).

The specification further confirms that communications are established prior to channels being monitored. Figure 6 depicts "the logic flow diagram for the registration, channel allocation, terminal assignment and reassignment process." Ex. 1 at 8:15-34. But in Figure 6, the "signalling processing" that leads to "reassignment," which corresponds to steps (b)-(d) and (e) of claim 1, occurs only if a terminal is not registering. Ex. 1 at Fig. 6. In other words, the "signalling processing" (including monitoring) is performed only once communications have been established. Therefore, claim 1 should be construed to require its steps be performed in specified order. *See Mformation*, 764 F.3d at 1399.

VI. CONCLUSION

For the foregoing reasons, Defendants respectfully request that the Court adopt their proposed constructions and reject C-Cation's proposed constructions.

Dated January 30, 2015

/s/ Matthew A. Traupman

J. Mark Mann (State Bar No. 12926150)
State Bar No. 12926150

G. Blake Thompson (State Bar No. 24042033)
MANN | TINDEL | THOMPSON
300 West Main Street
Henderson, Texas 75652
(903) 657-8540
(903) 657-6003 (fax)

Charles K. Verhoeven
California State Bar No. 170151
Quinn Emanuel Urquhart & Sullivan, LLP
50 California Street, 22nd Floor
San Francisco, CA 94111
Tel: (415) 875-6600
Fax: (415) 875-6700
charlesverhoeven@quinnemanuel.com

Edward J. DeFranco (*pro hac vice*)
Matthew A. Traupman (*pro hac vice*)
Quinn Emanuel Urquhart & Sullivan, LLP
51 Madison Ave.
New York, NY 10010
(212) 849-7000
(212) 849-7100 (fax)
eddefranco@quinnemanuel.com
matthewtraupman@quinnemanuel.com

Attorneys for Time Warner Cable Inc., Time Warner Cable Enterprises LLC, Time Warner Cable Texas LLC, ARRIS Group, Inc., Cisco Systems, Inc. and Casa Systems, Inc.

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on this 30th day of January, 2015.

/s/ Matthew A. Traupman